

**Claims:**

1. An aqueous composition for coating stainless steel containing:
  - (a) at least one dispersed polyurethane prepolymer having at least some blocked isocyanate groups;
  - (b) at least one other cross-linkable polymer dispersion or polymer solution;
  - and
  - (c) optionally, wetting agents and dispersants and flow control agents.
2. A composition as claimed in claim 1 wherein the dispersed blocked polyurethane prepolymer is prepared from low molecular weight polyols and aliphatic diisocyanates.
3. A composition as claimed in claim 2 wherein the blocking agent is selected from aldoximes, ketoximes, lactams, imidazole compounds,  $\beta$ -dicarbonyl compounds, alcohols, phenols, thioalcohols, thiophenols, secondary amines, amides, imides or hydroxamates.
4. A composition as claimed in claim 2 or claim 3 wherein there is used as the polyisocyanate an aliphatic or cycloaliphatic diisocyanate selected from the group consisting of:  
4,4'-dicyclohexylmethane diisocyanate ( $H_{12}MDI$ ), 1-isocyanatomethyl-3-isocyanato-1,5,5-trimethyl cyclohexane (isophorone diisocyanate, IPDI), cyclohexane 1,4-diisocyanate, hydrogenated xylylene diisocyanate ( $H_6XDI$ ), 1-methyl-2,4-diisocyanato-cyclohexane, *m*- or *p*-tetramethylxylene diisocyanate (*m*-TMXDI, *p*-TMXDI), dimeric fatty acid diisocyanates, tetramethoxybutane 1,4-diisocyanate, butane 1,4-diisocyanate, hexane 1,6-diisocyanate (HDI), 1,6-diisocyanato-2,2,4-trimethylhexane, 1,6-diisocyanato-2,4,4-trimethylhexane, and dodecane 1,12-diisocyanate ( $C_{12}DI$ ).
5. A composition as claimed in claim 1 wherein the other cross-linkable polymer component (b) is selected from reactive (meth)acrylate copolymers, polyurethane dispersions based on polyesterols, polycarbonates or polyethers, epoxide resin

dispersions or water-soluble or water-dispersible melamine/formaldehyde resins.

6. Use of a composition as claimed in claims 1 to 5 for preparing thin, dirt-repelling, hydrolysis-resistant and scratch-resistant coatings on stainless steel.

7. A process for coating stainless steel with scratch-resistant, dirt-repelling, thin layers, characterised in that it comprises the following steps:

- optionally, clean and degrease the stainless steel,
- optionally, rinse the surface,
- optionally, treat the metal surface with an adhesion promoter,
- coat the surface with a composition as claimed in at least one of claims 1 to 5 so that, after curing, a coating is obtained having a weight per unit area of 0.1 to 10 g/m<sup>2</sup>, preferably 0.5 to 5 g/m<sup>2</sup>,
- optionally, evaporate off volatile constituents,
- cure the coating at temperatures between 100 and 250°C for a period of 0.5 seconds to 40 minutes.

8. A process as claimed in claim 7 wherein the composition as claimed in claims 1 to 5 is applied to the surface of the strip by flow coating/squeezing, spraying/squeezing, suitable wiper and/or roller application.

9. A process according as claimed in 7 wherein the composition as claimed in claims 1 to 5 is applied to the surface of the shaped workpiece by spray application or by application with a brush.

10. A process as claimed in claim 9 wherein an airless, air-assisted or electrostatically-supported spray process is used as a spray system.

11. Use of the stainless steel coated as claimed in claims 7 to 10 for producing machines and equipment for the domestic, sanitary and clinical sectors and also for the food processing or pharmaceutical industries.